Abstract of the Disclosure

An efficient axial fan has a housing enclosure with a square inlet opening and a round outlet opening, a fan assembly with a drive motor and a propeller secured to a shaft and coupled thereto. The entrance of the fan housing is provided with a shutter assembly which is disposed horizontally or vertically across the square inlet opening and comprises a plurality of vanes including a central vane operated by a centrifugal shutter mechanism secured to one end of the propeller shaft, opposite to the propeller and adjacent to the central vane of the shutter assembly. The centrifugal shutter mechanism is normally provided with a hermetic housing comprising a pair of radial masses operatively connected via a pair of pivoting arms to an axial sliding reciprocating actuator which is disposed adjacent to the shutter central vane.